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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,978	03/05/2002	Aedan Diarmuid Cailean Coffey	ERLG.P-033	6375
21121	7590	01/25/2005	EXAMINER	
OPPEDAHL AND LARSON LLP				PEYTON, TAMMARA R
P O BOX 5068				ART UNIT
DILLON, CO 80435-5068				PAPER NUMBER
				2182

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/091,978	COFFEY ET AL.
Examiner	Art Unit	
Tammara R Peyton	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 November 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 4 and 9-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 9, 10 and 12-14 is/are allowed.

6) Claim(s) 4 and 11 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

The indicated allowability of claim 4 is withdrawn in view of the newly discovered reference. Rejections based on the previously cited reference follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox (US 6,532,547) and Aguilar et al. (US 5,867,640).

As per claim 1, Wilcox teaches a data storage apparatus comprising at least one disk drive (51-55) of kind having a single port input and output of data, least two disk controllers (11, 12, Figs. 1,2) each having data transmit and receive paths connected in port (via bus 31), and means switching (41-43, Fig. 1) control either controller if other should fail. (col. 5, lines 3-col. 9, lines 1-7) Wilcox does not expressly teach wherein the disk drives are serial ATA devices. However, serial ATA devices are well known in the art thereby making use of these well known devices obvious to one of ordinary skill. Further, redundant path configurations are also well known in the art and obvious to one

of ordinary skill. However, Wilcox is silent in respect to the receive paths of the controllers being connected via a buffer. Nonetheless, Aguilar teaches wherein the receive path of controllers (107 and 108, Fig.6) being connected via a buffer wherein if one controller should fail the system will still have access to the disk system via the back up controller. (Fig. 9) Aguilar specifically teaches that the buffer switch includes memories that is coupled to both controllers and also acts as an interface between the two controllers. (col. 6)

It would have been obvious to one of ordinary skill at the time the invention was made that Wilcox would have been motivated to implement Aguilar's method of connecting controllers via a buffer switch because doing so would ensure that failure of one or the other unit does not impact the system by routing around the failed controller.

Allowable Subject Matter

Claims 9, 10, and 12-14 are allowable over the prior art. The prior art does not expressly teach

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammara Peyton whose telephone number is (571)

272-4157. The examiner can normally be reached between 6:30 - 4:00 from Monday to Thursday, (I am off every first Friday), and 6:30-3:00 every second Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin, can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718. Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Mailed responses to this action should be sent to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

Faxes for Official/formal (After Final) communications or for informal or draft communications (please label "PROPOSED" or "DRAFT") sent to:

(703) 872-9306

Hand-delivered responses should be brought to:

USTPO, 2011 South Clark Place, Customer Window
Crystal Plaza Two, Lobby Room 1B03, Arlington, VA, 22202Crystal Park II, 2121.



Tammara Peyton

January 18, 2005